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<151> 2002-08-07

<150> US 60/411,153

<151> 2002-09-16

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EX03-051C-USpatentin.txt

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 <213> Homo sapiens
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 Ser Tyr Glu Asp Trp Leu Glu Asn Asn Gly Leu Ser Ile Ser Pro Phe
 35 40 45
 His Ile Arg Trp Gln Thr Ala Val Phe Asn Arg Ala Phe Tyr Ser Trp
 50 55 60
 Gly Arg Arg Lys Ala Arg Met Leu Tyr Gln Trp Phe Asn Phe Gly Met
 65 70 75 80
 Val Phe Gly Val Ile Ala Met Phe Ser Ser Phe Phe Leu Leu Gly Lys
 85 90 95
 Thr Leu Met Gln Thr Leu Ala Gln Met Met Ala Asp Ser Pro Ser Ser
 100 105 110
 Tyr Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser
 115 120 125
 Ser Ser Ser Ser Ser Ser Ser Ser Leu His Asn Glu Gln Val Leu Gln
 130 135 140
 Val Val Val Pro Gly Ile Asn Leu Pro Val Asn Gln Leu Thr Tyr Phe
 145 150 155 160
 Phe Thr Ala Val Leu Ile Ser Gly Val Val His Glu Ile Gly His Gly
 165 170 175
 Ile Ala Ala Ile Arg Glu Gln Val Arg Phe Asn Gly Phe Gly Ile Phe
 180 185 190
 Leu Phe Ile Ile Tyr Pro Gly Ala Phe Val Asp Leu Phe Thr Thr His
 195 200 205
 Leu Gln Leu Ile Ser Pro Val Gln Gln Leu Arg Ile Phe Cys Ala Gly
 210 215 220
 Ile Trp His Asn Phe Val Leu Ala Leu Leu Gly Ile Leu Ala Leu Val
 225 230 235 240
 Leu Leu Pro Val Ile Leu Leu Pro Phe Tyr Tyr Thr Gly Val Gly Val
 245 250 255

EX03-051C-USpatentin.txt

Leu Ile Thr Glu Val Ala Glu Asp Ser Pro Ala Ile Gly Pro Arg Gly
 260 265 270

Leu Phe Val Gly Asp Leu Val Thr His Leu Gln Asp Cys Pro Val Thr
 275 280 285

Asn Val Gln Asp Trp Asn Glu Cys Leu Asp Thr Ile Ala Tyr Glu Pro
 290 295 300

Gln Ile Gly Tyr Cys Ile Ser Ala Ser Thr Leu Gln Gln Leu Ser Phe
 305 310 315 320

Pro Val Arg Ala Tyr Lys Arg Leu Asp Gly Ser Thr Glu Cys Cys Asn
 325 330 335

Asn His Ser Leu Thr Asp Val Cys Phe Ser Tyr Arg Asn Asn Phe Asn
 340 345 350

Lys Arg Leu His Thr Cys Leu Pro Ala Arg Lys Ala Val Glu Ala Thr
 355 360 365

Gln Val Cys Arg Thr Asn Lys Asp Cys Lys Lys Ser Ser Ser Ser Ser
 370 375 380

Phe Cys Ile Ile Pro Ser Leu Glu Thr His Thr Arg Leu Ile Lys Val
 385 390 395 400

Lys His Pro Pro Gln Ile Asp Met Leu Tyr Val Gly His Pro Leu His
 405 410 415

Leu His Tyr Thr Val Ser Ile Thr Ser Phe Ile Pro Arg Phe Asn Phe
 420 425 430

Leu Ser Ile Asp Leu Pro Val Val Val Glu Thr Phe Val Lys Tyr Leu
 435 440 445

Ile Ser Leu Ser Gly Ala Leu Ala Ile Val Asn Ala Val Pro Cys Phe
 450 455 460

Ala Leu Asp Gly Gln Trp Ile Leu Asn Ser Phe Leu Asp Ala Thr Leu
 465 470 475 480

Thr Ser Val Ile Gly Asp Asn Asp Val Lys Asp Leu Ile Gly Phe Phe
 485 490 495

Ile Leu Leu Gly Gly Ser Val Leu Leu Ala Ala Asn Val Thr Leu Gly
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Leu Trp Met Val Thr Ala Arg
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<210> 9
<211> 344
<212> PRT
<213> Homo sapiens
<400> 9

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20 25 30

Pro Val Thr Pro Ser Ala Leu Val Leu Met Ser Arg Ser Asn Val Gln
35 40 45

Pro Thr Ala Ala Pro Gly Gln Lys Val Met Glu Asn Ser Ser Gly Thr
50 55 60

Pro Asp Ile Leu Thr Arg His Phe Thr Ile Asp Asp Phe Glu Ile Gly
65 70 75 80

Arg Pro Leu Gly Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Glu
85 90 95

Lys Lys Ser His Phe Ile Val Ala Leu Lys Val Leu Phe Lys Ser Gln
100 105 110

Ile Glu Lys Glu Gly Val Glu His Gln Leu Arg Arg Glu Ile Glu Ile
115 120 125

Gln Ala His Leu His His Pro Asn Ile Leu Arg Leu Tyr Asn Tyr Phe
130 135 140

Tyr Asp Arg Arg Arg Ile Tyr Leu Ile Leu Glu Tyr Ala Pro Arg Gly
145 150 155 160

Glu Leu Tyr Lys Glu Leu Gln Lys Ser Cys Thr Phe Asp Glu Gln Arg
165 170 175

Thr Ala Thr Ile Met Glu Glu Leu Ala Asp Ala Leu Met Tyr Cys His
180 185 190

Gly Lys Lys Val Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Leu
195 200 205

EX03-051C-USpatentin.txt

Gly Leu Lys Gly Glu Leu Lys Ile Ala Asp Phe Gly Trp Ser Val His
 210 215 220
 Ala Pro Ser Leu Arg Arg Lys Thr Met Cys Gly Thr Leu Asp Tyr Leu
 225 230 235 240
 Pro Pro Glu Met Ile Glu Gly Arg Met His Asn Glu Lys Val Asp Leu
 245 250 255
 Trp Cys Ile Gly Val Leu Cys Tyr Glu Leu Leu Val Gly Asn Pro Pro
 260 265 270
 Phe Glu Ser Ala Ser His Asn Glu Thr Tyr Arg Arg Ile Val Lys Val
 275 280 285
 Asp Leu Lys Phe Pro Ala Ser Val Pro Thr Gly Ala Gln Asp Leu Ile
 290 295 300
 Ser Lys Leu Leu Arg His Asn Pro Ser Glu Arg Leu Pro Leu Ala Gln
 305 310 315 320
 Val Ser Ala His Pro Trp Val Arg Ala Asn Ser Arg Arg Val Leu Pro
 325 330 335
 Pro Ser Ala Leu Gln Ser Val Ala
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<210> 10
 <211> 275
 <212> PRT
 <213> Homo sapiens

<400> 10

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 Lys Gly Lys Phe Gly Asn Val Tyr Leu Ala Arg Leu Lys Glu Ser His
 20 25 30
 Phe Ile Val Ala Leu Lys Val Leu Phe Lys Ser Gln Ile Glu Lys Glu
 35 40 45
 Gly Leu Glu His Gln Leu Arg Arg Glu Ile Glu Ile Gln Ala His Leu
 50 55 60
 Gln His Pro Asn Ile Leu Arg Leu Tyr Asn Tyr Phe His Asp Ala Arg
 65 70 75 80

EX03-051C-USpatentin.txt

Arg Val Tyr Leu Ile Leu Glu Tyr Ala Pro Arg Gly Glu Leu Tyr Lys
85 90 95

Glu Leu Gln Lys Ser Glu Lys Leu Asp Glu Gln Arg Thr Ala Thr Ile
100 105 110

Ile Glu Glu Val Ala Asp Ala Leu Thr Tyr Cys His Asp Lys Lys Val
115 120 125

Ile His Arg Asp Ile Lys Pro Glu Asn Leu Leu Leu Gly Phe Arg Gly
130 135 140

Glu Val Lys Ile Ala Asp Phe Gly Trp Ser Val His Thr Pro Leu Pro
145 150 155 160

Glu Arg Lys Thr Met Cys Gly Thr Leu Asp Tyr Leu Pro Pro Glu Met
165 170 175

Ile Glu Gly Arg Thr Tyr Asp Glu Lys Val Asp Leu Trp Cys Ile Gly
180 185 190

Val Leu Cys Tyr Glu Leu Leu Val Gly Tyr Pro Pro Phe Glu Ser Ala
195 200 205

Ser His Ser Glu Thr Tyr Arg Arg Ile Leu Lys Val Asp Val Arg Phe
210 215 220

Pro Leu Ser Met Pro Leu Gly Ala Arg Asp Leu Ile Ser Arg Leu Leu
225 230 235 240

Arg Tyr Gln Pro Leu Glu Arg Leu Pro Leu Ala Gln Ile Leu Lys His
245 250 255

Pro Trp Val Gln Ala His Ser Arg Arg Val Leu Pro Pro Cys Ala Gln
260 265 270

Met Ala Ser
275

<210> 11
<211> 403
<212> PRT
<213> Homo sapiens

<400> 11

Met Asp Arg Ser Lys Glu Asn Cys Ile Ser Gly Pro Val Lys Ala Thr
1 5 10 15

EX03-051C-USpatentin.txt

Ala Pro Val Gly Gly Pro Lys Arg Val Leu Val Thr Gln Gln Ile Pro
20 25 30

Cys Gln Asn Pro Leu Pro Val Asn Ser Gly Gln Ala Gln Arg Val Leu
35 40 45

Cys Pro Ser Asn Ser Ser Gln Arg Val Pro Leu Gln Ala Gln Lys Leu
50 55 60

Val Ser Ser His Lys Pro Val Gln Asn Gln Lys Gln Lys Gln Leu Gln
65 70 75 80

Ala Thr Ser Val Pro His Pro Val Ser Arg Pro Leu Asn Asn Thr Gln
85 90 95

Lys Ser Lys Gln Pro Leu Pro Ser Ala Pro Glu Asn Asn Pro Glu Glu
100 105 110

Glu Leu Ala Ser Lys Gln Lys Asn Glu Glu Ser Lys Lys Arg Gln Trp
115 120 125

Ala Leu Glu Asp Phe Glu Ile Gly Arg Pro Leu Gly Lys Gly Lys Phe
130 135 140

Gly Asn Val Tyr Leu Ala Arg Glu Lys Gln Ser Lys Phe Ile Leu Ala
145 150 155 160

Leu Lys Val Leu Phe Lys Ala Gln Leu Glu Lys Ala Gly Val Glu His
165 170 175

Gln Leu Arg Arg Glu Val Glu Ile Gln Ser His Leu Arg His Pro Asn
180 185 190

Ile Leu Arg Leu Tyr Gly Tyr Phe His Asp Ala Thr Arg Val Tyr Leu
195 200 205

Ile Leu Glu Tyr Ala Pro Leu Gly Thr Val Tyr Arg Glu Leu Gln Lys
210 215 220

Leu Ser Lys Phe Asp Glu Gln Arg Thr Ala Thr Tyr Ile Thr Glu Leu
225 230 235 240

Ala Asn Ala Leu Ser Tyr Cys His Ser Lys Arg Val Ile His Arg Asp
245 250 255

Ile Lys Pro Glu Asn Leu Leu Leu Gly Ser Ala Gly Glu Leu Lys Ile
Page 16

260

Ala Asp Phe Gly Trp Ser Val His Ala Pro Ser Ser Arg Arg Thr Thr
275 280 285

Leu Cys Gly Thr Leu Asp Tyr Leu Pro Pro Glu Met Ile Glu Gly Arg
290 295 300

Met His Asp Glu Lys Val Asp Leu Trp Ser Leu Gly Val Leu Cys Tyr
305 310 315 320

Glu Phe Leu Val Gly Lys Pro Pro Phe Glu Ala Asn Thr Tyr Gln Glu
325 330 335

Thr Tyr Lys Arg Ile Ser Arg Val Glu Phe Thr Phe Pro Asp Phe Val
340 345 350

Thr Glu Gly Ala Arg Asp Leu Ile Ser Arg Leu Leu Lys His Asn Pro
355 360 365

Ser Gln Arg Pro Met Leu Arg Glu Val Leu Glu His Pro Trp Ile Thr
370 375 380

Ala Asn Ser Ser Lys Pro Ser Asn Cys Gln Asn Lys Glu Ser Ala Ser
385 390 395 400

Lys Gln Ser

<210> 12
<211> 1050
<212> PRT
<213> Homo sapiens

<400> 12

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20 25 30

Arg Gln Gly Arg Ile Met Ser Thr Leu Gln Gly Ala Leu Ala Gln Glu
35 40 45

Ser Ala Cys Asn Asn Thr Leu Gln Gln Gln Lys Arg Ala Phe Glu Tyr
50 55 60

Glu Ile Arg Phe Tyr Thr Gly Asn Asp Pro Leu Asp Val Trp Asp Arg

65

70

75

80

Tyr Ile Ser Trp Thr Glu Gln Asn Tyr Pro Gln Gly Gly Lys Glu Ser
85 90 95

Asn Met Ser Thr Leu Leu Glu Arg Ala Val Glu Ala Leu Gln Gly Glu
100 105 110

Lys Arg Tyr Tyr Ser Asp Pro Arg Phe Leu Asn Leu Trp Leu Lys Leu
115 120 125

Gly Arg Leu Cys Asn Glu Pro Leu Asp Met Tyr Ser Tyr Leu His Asn
130 135 140

Gln Gly Ile Gly Val Ser Leu Ala Gln Phe Tyr Ile Ser Trp Ala Glu
145 150 155 160

Glu Tyr Glu Ala Arg Glu Asn Phe Arg Lys Ala Asp Ala Ile Phe Gln
165 170 175

Glu Gly Ile Gln Gln Lys Ala Glu Pro Leu Glu Arg Leu Gln Ser Gln
180 185 190

His Arg Gln Phe Gln Ala Arg Val Ser Arg Gln Thr Leu Leu Ala Leu
195 200 205

Glu Lys Glu Glu Glu Glu Glu Val Phe Glu Ser Ser Val Pro Gln Arg
210 215 220

Ser Thr Leu Ala Glu Leu Lys Ser Lys Gly Lys Lys Thr Ala Arg Ala
225 230 235 240

Pro Ile Ile Arg Val Gly Gly Ala Leu Lys Ala Pro Ser Gln Asn Arg
245 250 255

Gly Leu Gln Asn Pro Phe Pro Gln Gln Met Gln Asn Asn Ser Arg Ile
260 265 270

Thr Val Phe Asp Glu Asn Ala Asp Glu Ala Ser Thr Ala Glu Leu Ser
275 280 285

Lys Pro Thr Val Gln Pro Trp Ile Ala Pro Pro Met Pro Arg Ala Lys
290 295 300

Glu Asn Glu Leu Gln Ala Gly Pro Trp Asn Thr Gly Arg Ser Leu Glu
305 310 315 320

EX03-051C-USpatentin.txt

His Arg Pro Arg Gly Asn Thr Ala Ser Leu Ile Ala Val Pro Ala Val
 325 330 335
 Leu Pro Ser Phe Thr Pro Tyr Val Glu Glu Thr Ala Gln Gln Pro Val
 340 345 350
 Met Thr Pro Cys Lys Ile Glu Pro Ser Ile Asn His Ile Leu Ser Thr
 355 360 365
 Arg Lys Pro Gly Lys Glu Glu Gly Asp Pro Leu Gln Arg Val Gln Ser
 370 375 380
 His Gln Gln Ala Ser Glu Glu Lys Lys Glu Lys Met Met Tyr Cys Lys
 385 390 395 400
 Glu Lys Ile Tyr Ala Gly Val Gly Glu Phe Ser Phe Glu Glu Ile Arg
 405 410 415
 Ala Glu Val Phe Arg Lys Lys Leu Lys Glu Gln Arg Glu Ala Glu Leu
 420 425 430
 Leu Thr Ser Ala Glu Lys Arg Ala Glu Met Gln Lys Gln Ile Glu Glu
 435 440 445
 Met Glu Lys Lys Leu Lys Glu Ile Gln Thr Thr Gln Gln Glu Arg Thr
 450 455 460
 Gly Asp Gln Gln Glu Glu Thr Met Pro Thr Lys Glu Thr Thr Lys Leu
 465 470 475 480
 Gln Ile Ala Ser Glu Ser Gln Lys Ile Pro Gly Met Thr Leu Ser Ser
 485 490 495
 Ser Val Cys Gln Val Asn Cys Cys Ala Arg Glu Thr Ser Leu Ala Glu
 500 505 510
 Asn Ile Trp Gln Glu Gln Pro His Ser Lys Gly Pro Ser Val Pro Phe
 515 520 525
 Ser Ile Phe Asp Glu Phe Leu Leu Ser Glu Lys Lys Asn Lys Ser Pro
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 Pro Ala Asp Pro Pro Arg Val Leu Ala Gln Arg Arg Pro Leu Ala Val
 545 550 555 560
 Leu Lys Thr Ser Glu Ser Ile Thr Ser Asn Glu Asp Val Ser Pro Asp
 565 570 575

EX03-051C-USpatentin.txt

Val Cys Asp Glu Phe Thr Gly Ile Glu Pro Leu Ser Glu Asp Ala Ile
 580 585 590

Ile Thr Gly Phe Arg Asn Val Thr Ile Cys Pro Asn Pro Glu Asp Thr
 595 600 605

Cys Asp Phe Ala Arg Ala Ala Arg Phe Val Ser Thr Pro Phe His Glu
 610 615 620

Ile Met Ser Leu Lys Asp Leu Pro Ser Asp Pro Glu Arg Leu Leu Pro
 625 630 635 640

Glu Glu Asp Leu Asp Val Lys Thr Ser Glu Asp Gln Gln Thr Ala Cys
 645 650 655

Gly Thr Ile Tyr Ser Gln Thr Leu Ser Ile Lys Lys Leu Ser Pro Ile
 660 665 670

Ile Glu Asp Ser Arg Glu Ala Thr His Ser Ser Gly Phe Ser Gly Ser
 675 680 685

Ser Ala Ser Val Ala Ser Thr Ser Ser Ile Lys Cys Leu Gln Ile Pro
 690 695 700

Glu Lys Leu Glu Leu Thr Asn Glu Thr Ser Glu Asn Pro Thr Gln Ser
 705 710 715 720

Pro Trp Cys Ser Gln Tyr Arg Arg Gln Leu Leu Lys Ser Leu Pro Glu
 725 730 735

Leu Ser Ala Ser Ala Glu Leu Cys Ile Glu Asp Arg Pro Met Pro Lys
 740 745 750

Leu Glu Ile Glu Lys Glu Ile Glu Leu Gly Asn Glu Asp Tyr Cys Ile
 755 760 765

Lys Arg Glu Tyr Leu Ile Cys Glu Asp Tyr Lys Leu Phe Trp Val Ala
 770 775 780

Pro Arg Asn Ser Ala Glu Leu Thr Val Ile Lys Val Ser Ser Gln Pro
 785 790 795 800

Val Pro Trp Asp Phe Tyr Ile Asn Leu Lys Leu Lys Glu Arg Leu Asn
 805 810 815

Glu Asp Phe Asp His Phe Cys Ser Cys Tyr Gln Tyr Gln Asp Gly Cys
 820 825 830

EX03-051C-USpatentin.txt

Ile Val Trp His Gln Tyr Ile Asn Cys Phe Thr Leu Gln Asp Leu Leu
835 840 845

Gln His Ser Glu Tyr Ile Thr His Glu Ile Thr Val Leu Ile Ile Tyr
850 855 860

Asn Leu Leu Thr Ile Val Glu Met Leu His Lys Ala Glu Ile Val His
865 870 875 880

Gly Asp Leu Ser Pro Arg Cys Leu Ile Leu Arg Asn Arg Ile His Asp
885 890 895

Pro Tyr Asp Cys Asn Lys Asn Asn Gln Ala Leu Lys Ile Val Asp Phe
900 905 910

Ser Tyr Ser Val Asp Leu Arg Val Gln Leu Asp Val Phe Thr Leu Ser
915 920 925

Gly Phe Arg Thr Val Gln Ile Leu Glu Gly Gln Lys Ile Leu Ala Asn
930 935 940

Cys Ser Ser Pro Tyr Gln Val Asp Leu Phe Gly Ile Ala Asp Leu Ala
945 950 955 960

His Leu Leu Leu Phe Lys Glu His Leu Gln Val Phe Trp Asp Gly Ser
965 970 975

Phe Trp Lys Leu Ser Gln Asn Ile Ser Glu Leu Lys Asp Gly Glu Leu
980 985 990

Trp Asn Lys Phe Phe Val Arg Ile Leu Asn Ala Asn Asp Glu Ala Thr
995 1000 1005

Val Ser Val Leu Gly Glu Leu Ala Ala Glu Met Asn Gly Val Phe
1010 1015 1020

Asp Thr Thr Phe Gln Ser His Leu Asn Lys Ala Leu Trp Lys Val
1025 1030 1035

Gly Lys Leu Thr Ser Pro Gly Ala Leu Leu Phe Gln
1040 1045 1050

<210> 13
<211> 1085
<212> PRT
<213> Homo sapiens

<400> 13

Met Asp Thr Pro Glu Asn Val Leu Gln Met Leu Glu Ala His Met Gln
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Ser Tyr Lys Gly Asn Asp Pro Leu Gly Glu Trp Glu Arg Tyr Ile Gln
 20 25 30

Trp Val Glu Glu Asn Phe Pro Glu Asn Lys Glu Tyr Leu Ile Thr Leu
 35 40 45

Leu Glu His Leu Met Lys Glu Phe Leu Asp Lys Lys Lys Tyr His Asn
 50 55 60

Asp Pro Arg Phe Ile Ser Tyr Cys Leu Lys Phe Ala Glu Tyr Asn Ser
 65 70 75 80

Asp Leu His Gln Phe Phe Glu Phe Leu Tyr Asn His Gly Ile Gly Thr
 85 90 95

Leu Ser Ser Pro Leu Tyr Ile Ala Trp Ala Gly His Leu Glu Ala Gln
 100 105 110

Gly Glu Leu Gln His Ala Ser Ala Val Leu Gln Arg Gly Ile Gln Asn
 115 120 125

Gln Ala Glu Pro Arg Glu Phe Leu Gln Gln Gln Tyr Arg Leu Phe Gln
 130 135 140

Thr Arg Leu Thr Glu Thr His Leu Pro Ala Gln Ala Arg Thr Ser Glu
 145 150 155 160

Pro Leu His Asn Val Gln Val Leu Asn Gln Met Ile Thr Ser Lys Ser
 165 170 175

Asn Pro Gly Asn Asn Met Ala Cys Ile Ser Lys Asn Gln Gly Ser Glu
 180 185 190

Leu Ser Gly Val Ile Ser Ser Ala Cys Asp Lys Glu Ser Asn Met Glu
 195 200 205

Arg Arg Val Ile Thr Ile Ser Lys Ser Glu Tyr Ser Val His Ser Ser
 210 215 220

Leu Ala Ser Lys Val Asp Val Glu Gln Val Val Met Tyr Cys Lys Glu
 225 230 235 240

Lys Leu Ile Arg Gly Glu Ser Glu Phe Ser Phe Glu Glu Leu Arg Ala
 Page 22

Gln Lys Tyr Asn Gln Arg Arg Lys His Glu Gln Trp Val Asn Glu Asp
260 265 270

Arg His Tyr Met Lys Arg Lys Glu Ala Asn Ala Phe Glu Glu Gln Leu
275 280 285

Leu Lys Gln Lys Met Asp Glu Leu His Lys Lys Leu His Gln Val Val
290 295 300

Glu Thr Ser His Glu Asp Leu Pro Ala Ser Gln Glu Arg Ser Glu Val
305 310 315 320

Asn Pro Ala Arg Met Gly Pro Ser Val Gly Ser Gln Gln Glu Leu Arg
325 330 335

Ala Pro Cys Leu Pro Val Thr Tyr Gln Gln Thr Pro Val Asn Met Glu
340 345 350

Lys Asn Pro Arg Glu Ala Pro Pro Val Val Pro Pro Leu Ala Asn Ala
355 360 365

Ile Ser Ala Ala Leu Val Ser Pro Ala Thr Ser Gln Ser Ile Ala Pro
370 375 380

Pro Val Pro Leu Lys Ala Gln Thr Val Thr Asp Ser Met Phe Ala Val
385 390 395 400

Ala Ser Lys Asp Ala Gly Cys Val Asn Lys Ser Thr His Glu Phe Lys
405 410 415

Pro Gln Ser Gly Ala Glu Ile Lys Glu Gly Cys Glu Thr His Lys Val
420 425 430

Ala Asn Thr Ser Ser Phe His Thr Thr Pro Asn Thr Ser Leu Gly Met
435 440 445

Val Gln Ala Thr Pro Ser Lys Val Gln Pro Ser Pro Thr Val His Thr
450 455 460

Lys Glu Ala Leu Gly Phe Ile Met Asn Met Phe Gln Ala Pro Thr Leu
465 470 475 480

Pro Asp Ile Ser Asp Asp Lys Asp Glu Trp Gln Ser Leu Asp Gln Asn
485 490 495

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Glu Asp Ala Phe Glu Ala Gln Phe Gln Lys Asn Val Arg Ser Ser Gly
 500 505 510
 Ala Trp Gly Val Asn Lys Ile Ile Ser Ser Leu Ser Ser Ala Phe His
 515 520 525
 Val Phe Glu Asp Gly Asn Lys Glu Asn Tyr Gly Leu Pro Gln Pro Lys
 530 535 540
 Asn Lys Pro Thr Gly Ala Arg Thr Phe Gly Glu Arg Ser Val Ser Arg
 545 550 555 560
 Leu Pro Ser Lys Pro Lys Glu Glu Val Pro His Ala Glu Glu Phe Leu
 565 570 575
 Asp Asp Ser Thr Val Trp Gly Ile Arg Cys Asn Lys Thr Leu Ala Pro
 580 585 590
 Ser Pro Lys Ser Pro Gly Asp Phe Thr Ser Ala Ala Gln Leu Ala Ser
 595 600 605
 Thr Pro Phe His Lys Leu Pro Val Glu Ser Val His Ile Leu Glu Asp
 610 615 620
 Lys Glu Asn Val Val Ala Lys Gln Cys Thr Gln Ala Thr Leu Asp Ser
 625 630 635 640
 Cys Glu Glu Asn Met Val Val Pro Ser Arg Asp Gly Lys Phe Ser Pro
 645 650 655
 Ile Gln Glu Lys Ser Pro Lys Gln Ala Leu Ser Ser His Met Tyr Ser
 660 665 670
 Ala Ser Leu Leu Arg Leu Ser Gln Pro Ala Ala Gly Gly Val Leu Thr
 675 680 685
 Cys Glu Ala Glu Leu Gly Val Glu Ala Cys Arg Leu Thr Asp Thr Asp
 690 695 700
 Ala Ala Ile Ala Glu Asp Pro Pro Asp Ala Ile Ala Gly Leu Gln Ala
 705 710 715 720
 Glu Trp Met Gln Met Ser Ser Leu Gly Thr Val Asp Ala Pro Asn Phe
 725 730 735
 Ile Val Gly Asn Pro Trp Asp Asp Lys Leu Ile Phe Lys Leu Leu Ser
 740 745 750

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Gly Leu Ser Lys Pro Val Ser Ser Tyr Pro Asn Thr Phe Glu Trp Gln
 755 760 765

Cys Lys Leu Pro Ala Ile Lys Pro Lys Thr Glu Phe Gln Leu Gly Ser
 770 775 780

Lys Leu Val Tyr Val His His Leu Leu Gly Glu Gly Ala Phe Ala Gln
 785 790 800

Val Tyr Glu Ala Thr Gln Gly Asp Leu Asn Asp Ala Lys Asn Lys Gln
 805 810 815

Lys Phe Val Leu Lys Val Gln Lys Pro Ala Asn Pro Trp Glu Phe Tyr
 820 825 830

Ile Gly Thr Gln Leu Met Glu Arg Leu Lys Pro Ser Met Gln His Met
 835 840 845

Phe Met Lys Phe Tyr Ser Ala His Leu Phe Gln Asn Gly Ser Val Leu
 850 855 860

Val Gly Glu Leu Tyr Ser Tyr Gly Thr Leu Leu Asn Ala Ile Asn Leu
 865 870 875 880

Tyr Lys Asn Thr Pro Glu Lys Val Met Pro Gln Gly Leu Val Ile Ser
 885 890 895

Phe Ala Met Arg Met Leu Tyr Met Ile Glu Gln Val His Asp Cys Glu
 900 905 910

Ile Ile His Gly Asp Ile Lys Pro Asp Asn Phe Ile Leu Gly Asn Gly
 915 920 925

Phe Leu Glu Gln Asp Asp Glu Asp Asp Leu Ser Ala Gly Leu Ala Leu
 930 935 940

Ile Asp Leu Gly Gln Ser Ile Asp Met Lys Leu Phe Pro Lys Gly Thr
 945 950 955 960

Ile Phe Thr Ala Lys Cys Glu Thr Ser Gly Phe Gln Cys Val Glu Met
 965 970 975

Leu Ser Asn Lys Pro Trp Asn Tyr Gln Ile Asp Tyr Phe Gly Val Ala
 980 985 990

Ala Thr Val Tyr Cys Met Leu Phe Gly Thr Tyr Met Lys Val Lys Asn
 995 1000 1005

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Glu Gly Gly Glu Cys Lys Pro Glu Gly Leu Phe Arg Arg Leu Pro
1010 1015 1020

His Leu Asp Met Trp Asn Glu Phe Phe His Val Met Leu Asn Ile
1025 1030 1035

Pro Asp Cys His His Leu Pro Ser Leu Asp Leu Leu Arg Gln Lys
1040 1045 1050

Leu Lys Lys Val Phe Gln Gln His Tyr Thr Asn Lys Ile Arg Ala
1055 1060 1065

Leu Arg Asn Arg Leu Ile Val Leu Leu Leu Glu Cys Lys Arg Ser
1070 1075 1080

Arg Lys
1085

<210> 14
<211> 948
<212> PRT
<213> Homo sapiens

<400> 14

Met Gly Ile Lys Thr Leu Asn Leu Val Leu Gly Leu Lys Arg Ala Leu
1 5 10 15

Glu Phe Pro Glu Val Phe Met Met Glu Val Lys Asp Pro Asn Met Lys
20 25 30

Gly Ala Met Leu Thr Asn Thr Gly Lys Tyr Ala Ile Pro Thr Ile Asp
35 40 45

Ala Glu Ala Tyr Ala Ile Gly Lys Lys Glu Lys Pro Pro Phe Leu Pro
50 55 60

Glu Glu Pro Ser Ser Ser Ser Glu Glu Asp Asp Pro Ile Pro Asp Glu
65 70 75 80

Leu Leu Cys Leu Ile Cys Lys Asp Ile Met Thr Asp Ala Val Val Ile
85 90 95

Pro Cys Cys Gly Asn Ser Tyr Cys Asp Glu Cys Ile Arg Thr Ala Leu
100 105 110

Leu Glu Ser Asp Glu His Thr Cys Pro Thr Cys His Gln Asn Asp Val
115 120 125

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Ser Pro Asp Ala Leu Ile Ala Asn Lys Phe Leu Arg Gln Ala Val Asn
 130 135 140
 Asn Phe Lys Asn Glu Thr Gly Tyr Thr Lys Arg Leu Arg Lys Gln Leu
 145 150 155 160
 Pro Pro Pro Pro Pro Pro Ile Pro Pro Pro Arg Pro Leu Ile Gln Arg
 165 170 175
 Asn Leu Gln Pro Leu Met Arg Ser Pro Ile Ser Arg Gln Gln Asp Pro
 180 185 190
 Leu Met Ile Pro Val Thr Ser Ser Ser Thr His Pro Ala Pro Ser Ile
 195 200 205
 Ser Ser Leu Thr Ser Asn Gln Ser Ser Leu Ala Pro Pro Val Ser Gly
 210 215 220
 Asn Pro Ser Ser Ala Pro Ala Pro Val Pro Asp Ile Thr Ala Thr Val
 225 230 235 240
 Ser Ile Ser Val His Ser Glu Lys Ser Asp Gly Pro Phe Arg Asp Ser
 245 250 255
 Asp Asn Lys Ile Leu Pro Ala Ala Ala Leu Ala Ser Glu His Ser Lys
 260 265 270
 Gly Thr Ser Ser Ile Ala Ile Thr Ala Leu Met Glu Glu Lys Gly Tyr
 275 280 285
 Gln Val Pro Val Leu Gly Thr Pro Ser Leu Leu Gly Gln Ser Leu Leu
 290 295 300
 His Gly Gln Leu Ile Pro Thr Thr Gly Pro Val Arg Ile Asn Thr Ala
 305 310 315 320
 Arg Pro Gly Gly Gly Arg Pro Gly Trp Glu His Ser Asn Lys Leu Gly
 325 330 335
 Tyr Leu Val Ser Pro Pro Gln Gln Ile Arg Arg Gly Glu Arg Ser Cys
 340 345 350
 Tyr Arg Ser Ile Asn Arg Gly Arg His His Ser Glu Arg Ser Gln Arg
 355 360 365
 Thr Gln Gly Pro Ser Leu Pro Ala Thr Pro Val Phe Val Pro Val Pro

370

375

380

Pro Pro Pro Leu Tyr Pro Pro Pro Pro His Thr Leu Pro Leu Pro Pro
 385 390 395 400

Gly Val Pro Pro Pro Gln Phe Ser Pro Gln Phe Pro Pro Gly Gln Pro
 405 410 415

Pro Pro Ala Gly Tyr Ser Val Pro Pro Pro Gly Phe Pro Pro Ala Pro
 420 425 430

Ala Asn Leu Ser Thr Pro Trp Val Ser Ser Gly Val Gln Thr Ala His
 435 440 445

Ser Asn Thr Ile Pro Thr Thr Gln Ala Pro Pro Leu Ser Arg Glu Glu
 450 455 460

Phe Tyr Arg Glu Gln Arg Arg Leu Lys Glu Glu Glu Lys Lys Lys Ser
 465 470 475 480

Lys Leu Asp Glu Phe Thr Asn Asp Phe Ala Lys Glu Leu Met Glu Tyr
 485 490 495

Lys Lys Ile Gln Lys Glu Arg Arg Arg Ser Phe Ser Arg Ser Lys Ser
 500 505 510

Pro Tyr Ser Gly Ser Ser Tyr Ser Arg Ser Ser Tyr Thr Tyr Ser Lys
 515 520 525

Ser Arg Ser Gly Ser Thr Arg Ser Arg Ser Tyr Ser Arg Ser Phe Ser
 530 535 540

Arg Ser His Ser Arg Ser Tyr Ser Arg Ser Pro Pro Tyr Pro Arg Arg
 545 550 555 560

Gly Arg Gly Lys Ser Arg Asn Tyr Arg Ser Arg Ser Arg Ser His Gly
 565 570 575

Tyr His Arg Ser Arg Ser Arg Ser Pro Pro Tyr Arg Arg Tyr His Ser
 580 585 590

Arg Ser Arg Ser Pro Gln Ala Phe Arg Gly Gln Ser Pro Asn Lys Arg
 595 600 605

Asn Val Pro Gln Gly Glu Thr Glu Arg Glu Tyr Phe Asn Arg Tyr Arg
 610 615 620

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Glu Val Pro Pro Pro Tyr Asp Met Lys Ala Tyr Tyr Gly Arg Ser Val
 625 630 635 640
 Asp Phe Arg Asp Pro Phe Glu Lys Glu Arg Tyr Arg Glu Trp Glu Arg
 645 650 655
 Lys Tyr Arg Glu Trp Tyr Glu Lys Tyr Tyr Lys Gly Tyr Ala Ala Gly
 660 665 670
 Ala Gln Pro Arg Pro Ser Ala Asn Arg Glu Asn Phe Ser Pro Glu Arg
 675 680 685
 Phe Leu Pro Leu Asn Ile Arg Asn Ser Pro Phe Thr Arg Gly Arg Arg
 690 695 700
 Glu Asp Tyr Val Gly Gly Gln Ser His Arg Ser Arg Asn Ile Gly Ser
 705 710 715 720
 Asn Tyr Pro Glu Lys Leu Ser Ala Arg Asp Gly His Asn Gln Lys Asp
 725 730 735
 Asn Thr Lys Ser Lys Glu Lys Glu Ser Glu Asn Ala Pro Gly Asp Gly
 740 745 750
 Lys Gly Asn Lys His Lys Lys His Arg Lys Arg Arg Lys Gly Glu Glu
 755 760 765
 Ser Glu Gly Phe Leu Asn Pro Glu Leu Leu Glu Thr Ser Arg Lys Ser
 770 775 780
 Arg Glu Pro Thr Gly Val Glu Glu Asn Lys Thr Asp Ser Leu Phe Val
 785 790 795 800
 Leu Pro Ser Arg Asp Asp Ala Thr Pro Val Arg Asp Glu Pro Met Asp
 805 810 815
 Ala Glu Ser Ile Thr Phe Lys Ser Val Ser Glu Lys Asp Lys Arg Glu
 820 825 830
 Arg Asp Lys Pro Lys Ala Lys Gly Asp Lys Thr Lys Arg Lys Asn Asp
 835 840 845
 Gly Ser Ala Val Ser Lys Lys Glu Asn Ile Val Lys Pro Ala Lys Gly
 850 855 860
 Pro Gln Glu Lys Val Asp Gly Asp Val Arg Asp Leu Leu Asp Leu Asn
 865 870 875 880

EX03-051C-USpatentin.txt

Leu Gln Leu Lys Lys Pro Lys Arg Arg Leu Arg Arg Leu Thr Ile Leu
885 890 895

Asn His His Leu Pro Leu Arg Arg Met Lys Lys Ser Leu Glu Pro Pro
900 905 910

Glu Lys Leu Thr Leu Asn Gln Gln Lys Thr Pro Arg Asn Lys Thr Ser
915 920 925

Gln Arg Gly Lys Ser Glu Glu Gly Leu Phe Gln Arg Cys Gln Ile Arg
930 935 940

Lys Ala Asn Asn
945